REMARKS

This application has been reviewed in light of the Office Action dated August 22, 2007. Claims 1-19 are pending in this application, of which Claims 1, 6, 7, 9, 14, and 15 are in independent form. Claims 1, 4-9, 12, and 14-19 have been amended to define Applicant's invention more clearly. Favorable reconsideration is requested.

At paragraph 3 of the Office Action, the Claims 17 and 19 were objected to because of informalities. In particular, the Examiner requires Applicant to amend the recitation of "device according to any one of claims 9, 14 and 15" to "device according to any one of claims 9, 14 or 15". However, Applicant respectfully submits that the recitation of "any one of claims 9, 14, and 15" is, in fact, in proper multiply dependent form. (See MPEP § 608.01(n), Acceptable Multiple Dependent Claim Wording, third example.) Nevertheless, in order to advance prosecution, Claims 17 and 19 have been amended as required by the Office Action. Accordingly, withdrawal of the objection to Claims 17 and 19 is respectfully requested.

Claims 7 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,041,143 (*Chui et al.*). Claims 1-6, 8-14, and 16-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chui et al.*, in view of U.S. Patent No. 5,615,282 (*Spiegel et al.*).

Applicant submits that independent Claims 1, 6, 7, 9, 14, and 15, together with the claims dependent therefrom, are patentably distinct from the cited prior art for at least the following reasons.

Claim 1 is directed to a method of decoding an encoded digital image, encoded data of the digital image comprising a plurality of predefined resolutions. The method includes selecting a resolution lower than the highest of the predefined resolutions and different from each

of the predefined resolutions. The method also includes determining the predefined resolution immediately above the selected resolution, and determining a quantity of data of the determined predefined resolution, as a function of the ratio between the selected resolution and the determined predefined resolution. The method further includes decoding the image at the determined predefined resolution, as a function of the determined quantity of data, and subsampling the decoded image, as a function of the ratio between the selected resolution and the determined predefined resolution.

Among the notable features of the method of Claim 1 are (1) selecting a resolution lower than the highest of the predefined resolutions and different from each of the predefined resolutions, (2) determining the predefined resolution immediately above the selected resolution, and (3) determining a quantity of data of the determined predefined resolution as a function of a ratio between the selected resolution and the determined predefined resolution.

By virtue of these features of Claim 1, encoded image data that includes a plurality of predefined resolutions may be decoded, and an image may be obtained at a resolution different from the predefined resolutions. In addition, the features of Claim 1 can enable a high quality image to be generated by processing a limited quantity of data.

Chui et al., as understood by Applicant, relates to a multi-resolution image processing system in which images are stored in files that contain thumbnail data as well as a full image data structure. *Chui et al.* discusses that multi-resolution images are stored so as to obtain a compact representation, while allowing mid-resolution images or parts of images to be efficiently extracted without having to recompute coefficients (*see* col. 6, line 64 to col. 7, line 8).

However, in *Chui et al.*, each mid-level resolution image, even if between the thumbnail and the highest resolution versions, corresponds to a predefined resolution level. For example, when generating a mid-level resolution image (1) no computation or recomputation of coefficients is required (*see* col. 7, lines 6-8); (2) a set of wavelet transform regions is defined corresponding to a midlevel resolution level L (*see* col. 7, lines 11-12 and 25-27); and (3) an image array is selected to be four times the size of a user specified (mid-level) resolution level (*see* col. 7, line 52, to col. 8, line 6). In addition, *Chui et al.* discusses that predefined resolution levels differ from neighboring resolution levels by a resolution factor of four (*see* col. 1, lines 16-18).

Accordingly, nothing has been found in *Chui et al.* that would teach or suggest (1) selecting a resolution lower than the highest of the predefined resolutions and different from each of the predefined resolutions, (2) determining the predefined resolution immediately above the selected resolution, and (3) determining a quantity of data of the determined predefined resolution as a function of a ratio between the selected resolution and the determined predefined resolution, as recited in Claim 1.

Spiegel et al., as understood by Applicant, relates to a method and apparatus for adapting a digital representation of a color image. Apparently, *Spiegel et al.* discusses that a LW buffer stores a plurality of lines of LW data in a vicinity of a line currently being processed, and that a number of lines stored by the LW buffer is typically a function of a ratio between resolutions of input CT data and input LW data (see col. 36, lines 51-54).

The Examiner, at page 4 of the Office Action, concedes that "*Chui* does not disclose a function of the ratio between the selected resolution and the determined predefined resolution." The Examiner then states that "*Spiegel* discloses a function of the ratio (see item

1402, fig. 60, column 36, lines 51-54) between the selected resolution and the determined predefined resolution."

However, it is submitted that the ratio between the resolutions of the input CT data and the input LW data discussed in *Spiegel et al.* would not read on the step of "determining a quantity of data of the determined predefined resolution, as a function of a ratio between the selected resolution and the determined predefined resolution" as recited in Claim 1. This is because *Spiegel et al.* relates to the different field of representation of tone and color images, in which a first type of region is represented in a "continuous tone" (CT) format and a second type of region is represented in a "line work" (LW) format (*see* col. 2, lines 1-55).

Nothing has been found in *Chui et al.* or *Spiegel et al.*, whether considered either separately or in any permissible combination (if any) that would teach or suggest (1) selecting a resolution lower than the highest of the predefined resolutions and different from each of the predefined resolutions, (2) determining the predefined resolution immediately above the selected resolution, and (3) determining a quantity of data of the determined predefined resolution as a function of a ratio between the selected resolution and the determined predefined resolution, as recited in Claim 1.

Accordingly, Claim 1 is believed to be patentable over *Chui et al.* or *Spiegel et al.*, whether considered either separately or in any permissible combination (if any).

Independent Claims 6, 9, and 14 each include features which are similar in many relevant respects those discussed above in connection with Claim 1. Therefore, those claims also are believed to be patentable over *Chui et al.* and *Spiegel et al.* for at least the reasons discussed above.

Claim 7 is directed to a method of decoding encoded data, the encoded data comprising a plurality of predefined resolutions. The method includes selecting an intermediate resolution between a first predefined resolution and a second predefined resolution, the second predefined resolution being higher than the first predefined resolution, the intermediate resolution being different from the first predefined resolution and the second predefined resolution. The method also includes determining a quantity of encoded data of the second resolution depending on the intermediate resolution, decoding the determined quantity of encoded data, and subsampling the decoded data from the second resolution to the intermediate resolution.

Among other notable features of Claim 7 are (1) selecting an intermediate resolution between a first predefined resolution and a second predefined resolution, the second predefined resolution being higher than the first predefined resolution, the intermediate resolution being different from the first predefined resolution and the second predefined resolution, and (2) determining a quantity of encoded data of the second resolution depending on the intermediate resolution.

As noted above, *Chui et al.* discusses that multi-resolution images are stored so as to obtain a compact representation, while allowing mid-resolution images or parts of images to be efficiently extracted without having to recompute coefficients (*see* col. 6, line 64 to col. 7, line 8). However, in *Chui et al.*, each mid-level resolution image, even if between the thumbnail and the highest resolution versions, corresponds to a predefined resolution level. For example, when generating a mid-level resolution image (1) no computation or recomputation of coefficients is required (*see* col. 7, lines 6-8); (2) a set of wavelet transform regions is defined corresponding to a midlevel resolution level L (*see* col. 7, lines 11-12 and 25-27); and (3) an image array is

selected to be four times the size of a user specified (mid-level) resolution level (*see* col. 7, line 52, to col. 8, line 6). In addition, *Chui et al.* discusses that predefined resolution levels differ from neighboring resolution levels by a resolution factor of four (*see* col. 1, lines 16-18).

Furthermore, Claim 7 also recites "determining a quantity of encoded data of the second resolution depending on the intermediate resolution". In this connection, page 3 of the Office Action cites column 1, lines 43-44 of *Chui et al.* However, it is submitted that the "amount of computational resources" discussed in that portion of *Chui et al.* is merely a general statement about the means needed to perform the operation (computers), and cannot therefore be equated to a quantity of data, let alone to a quantity of data in a particular resolution as in Claim 7.

Accordingly, nothing has been found in *Chui et al.* that would teach or suggest (1) selecting an intermediate resolution between a first predefined resolution and a second predefined resolution, the second predefined resolution being higher than the first predefined resolution, the intermediate resolution being different from the first predefined resolution and the second predefined resolution, and (2) determining a quantity of encoded data of the second resolution depending on the intermediate resolution, as recited in Claim 7.

Accordingly, Claim 7 is believed to be patentable over *Chui et al.*

Independent Claim 15 includes features similar in many relevant respects those discussed above in connection with Claim 7. Therefore, Claim 15 is also believed to be patentable over *Chui et al.* for at least the reasons discussed above.

The other rejected claims in this application depend from one or another of the independent claims, and therefore are submitted to be patentable for at least the same reasons. Because each dependent claim also is deemed to define an additional aspect of the invention,

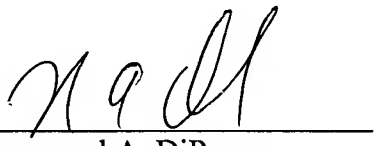
individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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